

CLAIMS

1. (Original) A freight management method, comprising
sensing a condition on a freight asset;
transmitting the information concerning the sensed condition over a wireless system to a monitor system in one format;
translating the information concerning the sensed condition into a second format;
transmitting the information concerning the sensed condition from the monitor system in the second format to a user capable of receiving in the second format.

2. (New) A freight management method as in claim 1, wherein

said step of transmitting the information concerning the sensed condition over a wireless system to a monitor system in one format includes responding to a trigger condition derived from user designated locations, destination areas, and freight operational settings and conditions on the asset, organized to allow translating the information concerning the sensed condition into the second format.

3. (New) A freight management method as in claim 1, further comprising:

comparing of the sensed condition from the monitor system transmitted over the wireless system with a standard predetermined condition specified within a standard freight shipment message, to notify users of a disparity and provide status updates in the standard freight shipment message of the user; and

transmitting via wireless control means to automatically change the actual condition on the asset to conform to the condition specified in the user's standard shipment message.

4. (New) A freight management method as in claim 1, wherein:

a translator identifies conditional information contained within a standard freight message with corresponding conditional information transmitted via wireless communications to a remote monitoring device attached to a freight asset;

the conditional information containing one of a user designated location, a commodity's pre-determined temperature set point setting, an arrival notification, a departure notification, attachment of auxiliary power equipment, in the format a user within the freight shipment documentation;

causing said translator to reconcile events derived from wireless communications directly in the format contained in the freight message of gps coordinates to a "named area or location" in a standard shipping document, thereby allowing a specific sensor reading to be directly applied through the entire monitoring, communication and network path to create notifications that the documented shipment condition is initiated, satisfied or terminated.

5. (New) A freight management method as in claim 2, wherein:

transmitting the information concerning the sensed condition over a wireless system to a monitor system occurs automatically by extracting relevant information from standard freight shipment messages and delivering predetermined conditions via the use of a translation process.

6. (New) A freight management method as in claim 1, wherein:

transmitting the information concerning the sensed condition over a wireless system to a monitor system includes wireless notification transmissions events in real-time in real-time from a freight asset, based on pre-determined conditions identified in a standard freight message, and, through a translation process, and associating the transmission with a meaningful event to be used for tracking and monitoring of freight assets.

7. (New) A freight management method as in claim 1, wherein:

transmitting the information concerning the sensed condition over a wireless system to a monitor system includes wireless notification transmissions events in real-time in real-time from a freight asset, based on pre-determined conditions identified in a standard freight message, and, through a translation process, and associating the transmission with a meaningful event to be used for tracking and monitoring of a commodity transported in a freight shipment.

8. (New) A freight management method as in claim 1, further comprising:

evaluating information about freight shipments, contained within standard freight messages, including one of terminal operations and intermodal ramp activities and related activities within the sensors,

triggering and communicating in real time via the wireless system for automatically generating status notifications such that the triggering results in the creation of the standard freight message from the entry of the sensor into an area governed by gps coordinates on the intelligent device, pre-determined by the designated locations in the customer's freight systems, corresponding to the customers' designated location, delivered in the same customer-oriented format generic to the customer's freight system in real-time, whereby specific arrival and departure freight messages are created automatically by wireless communications for the same designated locations of the user and in the user's freight equipment format.

9. (New) A freight management method as in claim 1, further comprising:

automatically applying specific conditional information contained in standard freight messages to automatically evaluate prescribed and pre-determined shipment conditions to actual shipment conditions communicated by wireless communications, including a prescribed temperature set point setting for a commodity identified in the standard freight messages of refrigerated transport equipment.

10. (New) A freight management method as in claim 1, further comprising:

automatically comparing of the weight of the load of a freight asset in one of the monitoring system and the user.

11. (New) A freight management method as in claim 1, further comprising:

evaluating messages initiated by a sensor at one of terminal operations and intermodal Ramp Activity, and freight asset location messages and related status messages, triggered by a change in a critical condition to allow immediate exception reporting in one of a monitoring system or a user system.

12. (New) A freight management method as in claim 1, further comprising:

evaluating pre-determined conditional information contained in standard freight messages, including one of bills of lading and waybills, to compare pre-determined shipment conditions, including a set point temperature of a commodity within a freight asset, and automatically sending commands to an intelligent device including the sensor on the freight asset to change the condition, including the set point temperature, to be compliant with the pre-determined condition in the standard freight message appropriate for the commodity;

said sensor sending a confirmation notification that the condition, such as the set point temperature, is changed, and the confirmation of the actual conditional change is incorporated into a standard freight status message in the format of the user's system to assure compliance to the specified condition.

13. (New) A freight management method as in claim 1, further comprising:

transmitting a command to a sensor to lock doors of freight asset when the asset has left a prescribed location contained in the standard freight message.

14. (New) A freight management method as in claim 1, further comprising:

automatically initiating a shipment status message in standard shipment formats, using real-time information from a sensor by requesting it via wireless communications, and wirelessly transmitting information in the standard freight message.

15. (New) A freight management method as in claim 1, further comprising:

Loading pre-determined conditions and trigger events with a translator onto a sensor on a freight asset, said conditions corresponding to the standard conditions contained within standard freight messages, such as designated locations, set point temperature and presence of auxiliary equipment.

16 (New) A freight management method as in claim 1, further comprising:

triggering onto a sensor events which correspond terminal operations and intermodal ramp activity and related standard freight messages' relevant status information to permit a direct linkage between the users of standard freight information trigger events and corresponding trigger events managed by a sensor.

17, (New) A freight management method as in claim 1, further comprising:

establishing pre-determined conditions and trigger events on a fleet of freight assets corresponding to an individual user, and establishing other pre-determined conditions and trigger events on an entirely separate fleet associated with another user, etc. on the basis of relevant information in the standard freight shipment messages, including one of lading, waybills, status messages, and location messages.

18. (New) A freight management method as in claim 1, further comprising:

wireless intelligence including a sensor on a freight asset to evaluate status conditions that automatically trigger transmissions, which are translated into industry standard freight messages, to include EDI and XML-based standard freight shipment messages, including but not limited to EDI 322.

19. (New) A freight management method as in claim 1, further comprising:

tightly coupling and integrating intelligent wireless devices mounted on freight assets with standard shipment messages communicating relevant shipment conditions in the same format via a translator.